IN THE CLAIMS

1 - 3 (Cancelled)

4. (Presently Amended) A method of treating an established staphylococcal infection of at least one organ or tissue selected from the group consisting of heart valve, blood, kidney, lung, bone and meninges, comprising systemically administering to a human suffering from at least one of said infections an effective amount of at least one recombinantly produced lysostaphin analogue;

wherein multiple doses of the lysostaphin analogue are administered and wherein the amount of lysostaphin analogue(s) administered is ~~no more than~~ from 0.5 to 30 mg/kg/day.

5. (Presently Amended) A method of treating an established infection associated with a catheter or a prosthetic device, comprising systemically administering to a human suffering from such an infection an effective amount of at least one recombinantly produced lysostaphin analogue;

wherein multiple doses of the lysostaphin analogue are administered and wherein the amount of lysostaphin analogue(s) administered is ~~no more than~~ from 0.5 to 30 mg/kg/day.

6 - 27 (Cancelled)

28.(Withdrawn) A therapeutic composition for the treatment of staphylococcal infection in humans, comprising at least one recombinantly produced lysostaphin analogue having the biological activity of proteolytic attack against glycine-containing bridges in the cell wall peptidoglycan of staphylococci and a pharmaceutically acceptable carrier, wherein the composition is suitable for systemic administration.

29 - 31 (Cancelled)

32.(Previously Presented) The method of Claim 4, further comprising administering a second antimicrobial agent selected from the group consisting of a rifamycin, a glycopeptide and

combinations thereof.

33 - 34 (Cancelled)

35.(Withdrawn) The composition of Claim 28 further comprising at least one rifamycin or glycopeptide or combination thereof.

36 - 43 (Cancelled)

44.(Previously Presented) The method of Claim 4, wherein the amount of lysostaphin analogue(s) administered is no more than 25 mg/kg/day.

45.(Previously Presented) The method of Claim 5, wherein the amount of lysostaphin analogue(s) administered is no more than 25 mg/kg/day.

46.(Previously Presented) The method of Claim 32, wherein the amount of lysostaphin analogue(s) administered is no more than 25 mg/kg/day.

47.(Previously Presented) The method of Claim 58, wherein the amount of lysostaphin analogue(s) administered is no more than 25 mg/kg/day.

48.(Previously Presented) The method of Claim 4, wherein the amount of lysostaphin analogue(s) administered is between 3 mg/kg/day and 25 mg/kg/day.

49.(Previously Presented) The method of Claim 5, wherein the amount of lysostaphin analogue(s) administered is between 3 mg/kg/day and 25 mg/kg/day.

50.(Previously Presented) The method of Claim 32, wherein the amount of lysostaphin analogue(s) administered is between 3 mg/kg/day and 25 mg/kg/day.

51.(Previously Presented) The method of Claim 58, wherein the amount of lysostaphin analogue(s) administered is between 3 mg/kg/day and 25 mg/kg/day.

52 - 55 (Cancelled)

56.(Previously Presented) The method of Claim 32, wherein the at least one lysostaphin analogue is administered simultaneously with the second antimicrobial agent.

57.(Previously Presented) The method of Claim 4, wherein the at least one organ or tissue is a heart valve.

58.(Previously Presented) The method of Claim 5, further comprising administering a second antimicrobial agent selected from the group consisting of a rifamycin, a glycopeptide and combinations thereof.

59. (Previously Presented) The method of Claim 58, wherein the at least one lysostaphin analogue is administered simultaneously with the second antimicrobial agent.

60. (Cancelled)

61. (New) The method of Claim 4, wherein the infection is cleared from the at least one organ or tissue.

62. (New) The method of Claim 4, wherein treatment results in complete sterilization of the infection.

63. (New) The method of Claim 5, wherein the infection is cleared from the human.

64. (New) The method of Claim 5, wherein treatment results in complete sterilization of the infection.

65. (New) The method of Claim 4, wherein the at least one recombinantly produced lysostaphin analogue is administered to the human without a second antimicrobial agent which is not a lysostaphin analogue.

66. (New) The method of Claim 5, wherein the at least one recombinantly produced lysostaphin analogue is administered to the human without a second antimicrobial agent which is not a lysostaphin analogue.